# FORMER LI TUNGSTEN SITE (E130046) GLEN COVE, NEW YORK NYSDEC SPILL #14-05550

# VISUALLY STAINED PETROLEUM SOIL INVESTIGATION / REMEDIATION REPORT ADDENDUM 1

#### **SUBMITTED TO:**



New York State Department of Environmental Conservation Division of Environmental Remediation – Remedial Bureau E 5625 Broadway Albany, New York 12233

#### PREPARED FOR:

RXR-Glen Isle Partners, LLC 625 RXR Plaza Uniondale, New York 11556

#### **PREPARED BY:**



P.W. Grosser Consulting, Inc. 630 Johnson Avenue, Suite 7 Bohemia, New York 11716 Phone: 631-589-6353

Fax: 631-589-8705

James P Rhodes, CPG, Senior Vice President

Derek Ersbak, Project Manager

PWGC Project Number: RGI1404

jimr@pwgrosser.com dereke@pwgrosser.com



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ACRONYM	DEFINITION
CAMP	Community Air Monitoring Plan
CDA	Community Development Agency
CEI	Cipriano Excavation Inc.
COC	Chain of Custody
EB	Equipment Blank
FD	Field Duplicate
HASP	Health and Safety Plan
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
PCB	Polychlorinated Biphenyls
PID	Photoionization Detector
PWGC	P. W. Grosser Consulting, Inc.
QA/QC	Quality Assurance / Quality Control
ROD	Record of Decision
RRUSCO	Restricted Residential Use Soil Cleanup Objective
SEC	Safety and Ecology Corporation
SMP	Site Management Plan
SVOC	Semi-Volatile Organic Compound
SWCL	Site-Wide Cleanup Levels
ТВ	Trip Blank
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound



#### 1.0 INTRODUCTION

This Visually Stained Petroleum Soil Investigation / Remediation Report Addendum 1 has been prepared by P.W. Grosser Consulting Inc. (PWGC), on behalf of RXR-Glen Isle Partners, LLC for the former Li Tungsten Site (E130046) located in Glen Cove, New York. This addendum report summarized the findings of supplemental waste characterization and confirmatory endpoint sampling. The scope of work was based upon the requirements of the New York State Department of Environmental Conservation (NYSDEC) for the subject property as explained ahead.



#### 2.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

The site was remediated in accordance with the scope of work presented in the City of Glen Cove Community Development Agency's (CDA) September 8, 2014 Underground Storage Tank (UST) Closure letter plan and the Draft Site Management Plan (SMP). Remedial actions were taken in accordance with applicable laws and regulations, and the site-specific Health and Safety Plan (HASP).

The following remedial actions were completed in this program:

- 1. Performed Community Air Monitoring Program for particulates and volatile organic vapors,
- 2. Collected and analyzed end-point samples to evaluate the performance of the remedy with respect to attainment of Site-Wide Cleanup Levels (SWCLs),
- 3. Sampled and analyzed excavated media as required by disposal facilities.
- 4. Submitted Visually Stained Petroleum Soil Investigation / Remediation Report Addendum 1 that details the remedial activities.



#### 3.0 COMPLIANCE WITH REMEDIAL WORK PLAN

#### 3.1 Health and Safety Plan

The remedial construction activities performed under this program were in compliance with the site-specific HASP and applicable laws and regulations. The Site Safety Coordinator was Ms. Amanda Racaniello.

#### 3.2 Community Air Monitoring Plan

The Community Air Monitoring Plan (CAMP) provided for the collection and analysis of air samples during remedial construction activities to ensure proper protections were employed to protect workers and the neighboring community. Monitoring was performed in compliance with the CAMP. Monitoring levels did not exceed action levels. The results of Community Air Monitoring are shown in **Appendix A**.

#### 3.3 Engineering Specifications and Controls

The draft SMP provided detailed plans for managing soils / materials that were disturbed at the Site, including excavation, handling, storage, transport and disposal. It also included a series of controls to assure effective, nuisance free remedial activity in compliance with applicable laws and regulations. Remedial construction activities performed under this program were in compliance with the draft SMP.

#### 4.0 REMEDIAL PROGRAM

Between February 6, 2015 and February 23, 2015 as documented in the report Visually Stained Petroleum Soil Investigation / Remediation Report (April 2015), 160 cubic yards of visually stained soil was excavated from TP-P-006 and 720 cubic yards of visually stained soil was excavated from TP-P-010 and stockpiled to the west of the former Lounge Building for future characterization and disposal. The soil was placed on polyethylene sheeting overtop of a soil berm and covered with another layer of polyethylene sheeting to prevent runoff.

#### 4.1 Waste Characterization

Prior to removal of the additional soil stockpile from the Site, soils were evaluated to determine if the material was still acceptable for disposal by Clean Earth, Inc.

#### 4.1.1 Sampling Protocol

On March 25, 2015, PWGC mobilized to the site with Safety and Ecology Corporation (SEC) and Cipriano Excavation Inc. (CEI) to collect waste characterization samples from the petroleum soil stockpile. A track mounted excavator was utilized to dig into the stockpile at several locations so representative samples of the material were collected. A total of two composite and ten grab samples were collected and analyzed by Test America Laboratories, Inc. for the list of constituents specified by Clean Earth, Inc.

#### 4.1.2 Facility Review and Approval

Laboratory analytical results were submitted to Clean Earth, Inc. for review. Based upon the review of the analytical data, the material was deemed acceptable for disposal at the Carteret facility located in New Jersey. A waste acceptance letter is currently being drafted by the facility. The laboratory analytical report is included in **Appendix B**.

#### 4.2 Confirmatory End-point Sampling – TP-P-006

During the initial investigative phase of TP-P-006, visually stained soil were removed from the TP-P-006 location until visually clean soils were encountered that did not exhibit an odor. The NYSDEC field representative (Mr. Kristopher Kennan) was onsite during the activities..

#### 4.2.1 Sampling Protocol

On April 22, 2015, PWGC, mobilized to the site with SEC and CEI to collect confirmatory end-point samples from TP-P-006 according to the previously-approved protocols and DER-10. CEI utilized a

track mounted excavator to remove the NYSDEC-approved backfill material until the demarcation barrier was encountered. Confirmatory soil samples were collected from beneath the demarcation barrier at the frequency specified in the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, May 2010. A total of eleven confirmatory soil samples were collected (EP032 through EP042). Sample locations are shown on **Figure 1**. Soil samples were scanned for the presence of volatile organic vapors with a photoionization detector (PID) by PWGC and for radiation with a Ludlum<sup>TM</sup> Model 2221 count-rate meter and scaler equipped with a 100 cm<sup>3</sup> (2" x 2") Nal detector by SEC. Screening results did not identify volatile organic vapors or radiation above background levels. Following the collection of confirmatory soil samples, the demarcation barrier was repaired and NYSDEC-approved backfill material restored.

End-point soil samples were submitted to Test America Laboratories, Inc. and were analyzed for the presence of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260 and semi-volatile organic compounds (SVOCs) by USEPA Method 8270, metals by USEPA Method 6010/7471, and polychlorinated biphenyls (PCBs) by USEPA Method 8082. PCB analysis was limited to four of the eleven samples. This was the requirements previously requested by the NYSDEC.

4.2.4 Confirmatory End Point Sampling Results

End-point analytical results were compared to the SWCLs established in the Record of Decision (ROD) for the Site. In the absence of a ROD cleanup objective, the Restricted-Residential Use Soil Cleanup Objectives (RRUSCOs) as specified in NYSDEC 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 were applied.

VOCs were detected above laboratory method detection limits (MDLs) in each end-point soil sample. The detections were relatively minor and did not exceed their respective NYSDEC RRUSCOs.

SVOCs were detected above laboratory MDLs in ten of the end-point soil samples. SVOCs exceeded their respective NYSDEC RRUSCOs in two (EP032 and EP042) of the eleven end-point samples. The exceedances are relatively low and are not indicative of remaining source material. No other detections exceeded their respective NYSDEC RRUSCOs.

Metals were detected above laboratory MDLs in each end-point sample. The detections were relatively minor and did not exceed their respective RRUSCO or SWCLs with the exception of arsenic

in two samples (EP039 and EP040) and mercury in one sample (EP040).

PCBs were detected above laboratory MDLs in three of the four soil samples analyzed for PCBs. The detections were relatively minor and did not exceed their respective NYSDEC RRUSCOs.

A summary table and map of end-point locations is included in **Tables 1** through **4**. Analytical data

sheets are included as Appendix B.

4.3 Quality Assurance / Quality Control

The overall quality assurance/quality control (QA/QC) objective for the field investigation was to

develop and implement procedures that provide data of known and documented quality. QA/QC

characteristics for data include precision, accuracy, representativeness, completeness, and

comparability. The purpose of the QA/QC activities developed for this site was to verify the integrity

of the work performed at the site to assure that the data collected are of the appropriate type and

quality needed for the intended use.

The QA/QC program included the preparation and analysis of field QA/QC samples such as field

blanks, field duplicates, and matrix spike duplicates.

4.3.1 QA/QC Samples

To assess the adequacy of sample collection and decontamination procedures performed in the

field, QA/QC samples were collected and analyzed throughout the field sampling program. In

general, QA/QC samples confirmed that the procedures performed in the field were consistent and

acceptable. Reported detections in the equipment blanks did not impact the interpretation of

sample data. QA/QC samples collected for laboratory analysis included trip blanks (TB), equipment

blanks (EB), blind/field duplicates (FD), matrix spike (MS), and matrix spike duplicates (MSD). The EB

samples were collected daily for each sampling method that used disposable equipment such as the

acetate liners and polyethylene tubing from the peristaltic pump. Equipment blanks were collected

by pouring laboratory-supplied de-ionized water over sampling equipment and collecting the water

in the appropriate sample container(s). FD and MS/MSD samples were submitted at a minimum of

one each per twenty samples.

Frequency

**Equipment Blank** 

Type

One per day per sample matrix

Blind/Field Duplicate

One per 20 samples per matrix

P.W. Grosser Consulting, Inc • P.W. Grosser Consulting Engineer & Hydrogeologist, PC 630 Johnson Avenue, Suite 7 • Bohemia, NY 11716

PH 631.589.6353 • FX 631.589.8705 • www.pwgrosser.com

New York, NY • Syracuse, NY • Seattle, WA • Shelton, CT

Matrix Spike/Matrix Spike Duplicate

Trip Blanks

One per 20 samples per matrix

One per sample cooler with VOC samples present

4.3.2 Data Usability Summary

PWGC reviewed the Laboratory QC Summary Package for the sample batch in which the project

samples are included so that an appropriate summary could be prepared.

The data reports include eleven (11) soil, one (1) MS/MSD, one (1) EB, one (1) FD, and one (TB)

samples. The samples associated with this data set were collected on April 22, 2015. The samples

were received at Test America Laboratories, Inc. located in Edison, New Jersey. The cooler

temperatures were within QC limits upon receipt. The samples were analyzed for VOCs (USEPA

Method 8260C), SVOCs (USEPA Method 8270D), Total Metals (USEPA Method 7470A), and PCB

(USEPA Method 8082A) as specified on the Chain of Custody (COC) documentation that

accompanied the samples to the laboratory.

The analytical results submitted were reviewed and the analytical results assessed against the

project data quality objectives in the preparation of this report. There were no problems with the

analyses and data for associated QC met laboratory specifications. Overall, the data submitted by

Test America Laboratories, Inc. met the project data quality objectives and are usable to determine

the presence, absence, and magnitude of environmental contamination in the samples collected

from the site. The Laboratory QC Package is included as Appendix B.

P.W. Grosser Consulting, Inc • P.W. Grosser Consulting Engineer & Hydrogeologist, PC 630 Johnson Avenue, Suite 7 • Bohemia, NY 11716

PH 631.589.6353 • FX 631.589.8705 • www.pwgrosser.com

New York, NY • Syracuse, NY • Seattle, WA • Shelton, CT

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#### 5.0 CONCLUSIONS AND RECOMMENDATIONS

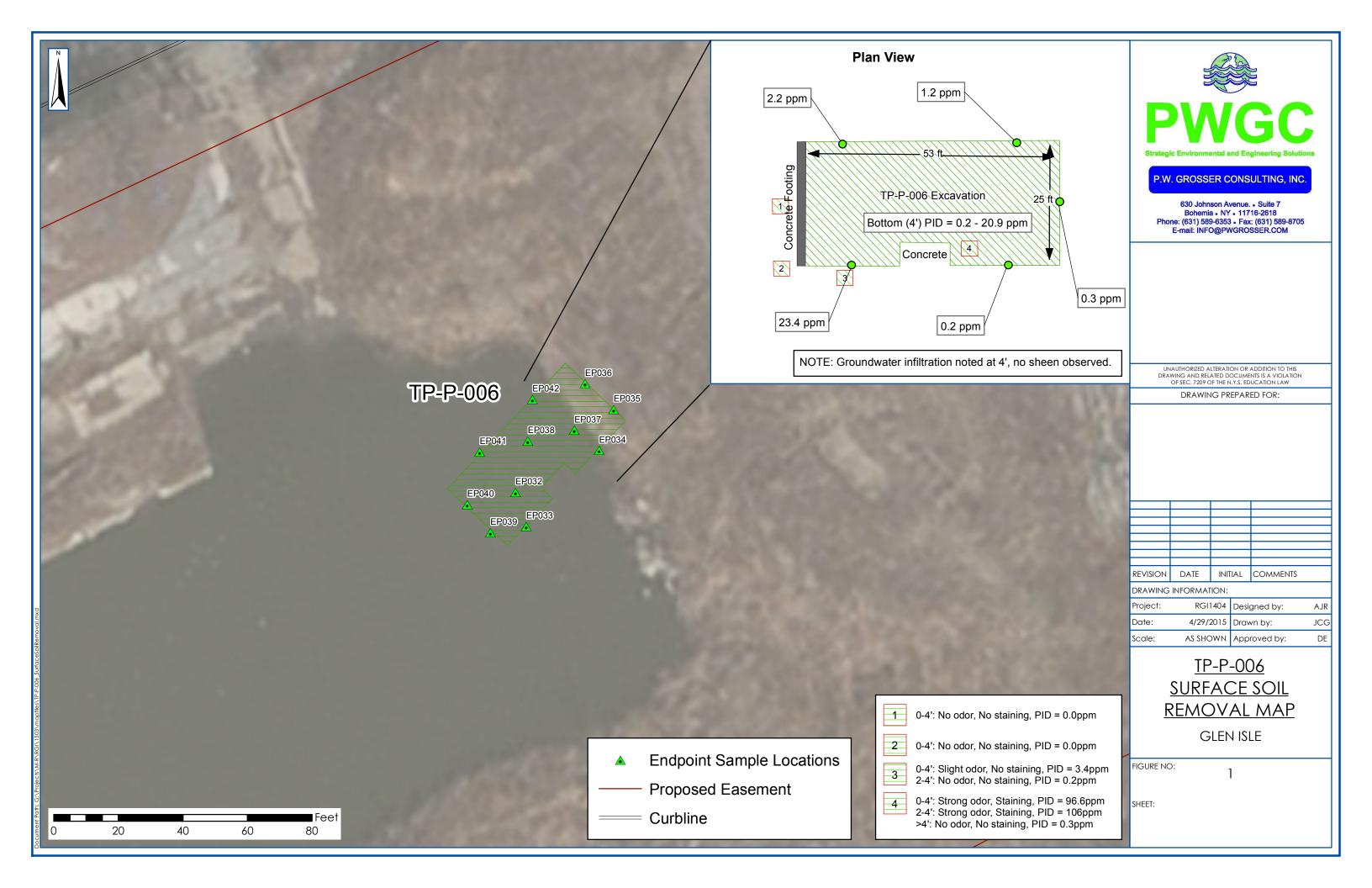
Community air monitoring was performed during all soil intrusive activities in accordance with the approved CAMP. Action levels were not exceeded.

Four of the eleven confirmatory end-point samples collected from the TP-P-006 remedial excavation had slight exceedances of SVOC and Metal SCOs. These exceedances have been proposed to be managed through the implementation of engineering and institutional controls.

The visually stained soil stockpile was characterized and found acceptable for disposal at the Clean Earth, Inc. facility (Carteret) located in New Jersey. A formal acceptance letter is being drafted by the proposed disposal facility and will be forwarded to the regulatory agencies along with the facility permit for approval prior to removing the stockpiled soil from the site.



# **FIGURE**





# **TABLES**

#### Table 1 Soil Sample Analytical Data Summary Volatile Organic Compounds EPA Method 8260

#### LiTungsten Site

				LiTungsten S	ile							
Client Sample ID:		EP032	EP033	EP034	EP035	EP036	EP037	EP038	EP039	EP040	EP041	EP042
Sample Depth:	NYSDEC Restricted-	4' (B)	3-4' (SW)	3-4' (SW)	3-4' (SW)	3-4' (SW)	4' (B)	4' (B)	3-4' (SW)	3-4' (SW)	3-4' (SW)	3-4' (SW)
Laboratory ID:	Residential Use SCO (1)	460-93744-3	460-93744-4	460-93744-5	460-93744-2	460-93744-7	460-93744-8	460-93744-9	460-93744-10	460-93744-11	460-93744-12	460-93744-13
Sampling Date:		4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015
Volatile Organic Compounds (µg/kg)												
1,1,1-Trichloroethane <sup>f</sup>	100,000 <sup>a</sup>	0.31 U	0.40 U	0.34 U	0.40 U	0.38 U	0.31 U	0.36 U	27	0.30 U	0.35 U	0.33 U
1,1,2,2-Tetrachloroethane	NS	0.14 U	0.18 U	0.15 U	0.18 U	0.17 U	0.14 U	0.16 U	18 U	0.14 U	0.15 U	0.15 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	0.36 U	0.47 U	0.40 U	0.47 U	0.44 U	0.36 U	0.42 U	33 U	0.35 U	0.40 U	0.4 U
1,1,2-Trichloroethane	NS	0.23 U	0.30 U	0.40 U	0.30 U	0.44 U	0.23 U	0.42 U	33 0	0.22 U	0.40 U	0.24 U
	26,000	0.23 U	0.53 J	0.25 U	0.36 U	0.26 U	0.23 U	0.26 U	43 J	1.0	0.25 U	0.59 J
1,1-Dichloroethane <sup>1</sup>	100,000 <sup>a</sup>	0.28 U	0.43 U	0.37 U	0.44 U	0.41 U	0.33 U	0.39 U	64 J	0.35 J	0.37 U	0.36 U
1,1-Dichloroethene <sup>r</sup>	NS									1		
1,2,4-Trichlorobenzene	52,000	0.26 U	0.34 U	0.29 U		0.32 U	0.26 U	0.30 U	26 U	0.26 U	0.29 U	0.28 U
1,2,4-Trimethylbenzene <sup>t</sup> 1,2-Dibromo-3-chloropropane	52,000 NS	100 0.39 U	0.36 U 0.50 U	0.31 U	2.0 0.50 U	0.34 U	0.20	0.32 U 0.44 U	22 U 22 U	0.27 U	0.31 U	0.29 U
				0.43 U		0.47 U	0.38 U			0.38 U	0.43 U	0.4 U
1,2-Dibromoethane	NS 100,000 <sup>a</sup>	0.098 U	0.13 U	0.11 U	0.13 U	0.12 U	0.097 U	0.11 U	18 U	0.096 U	0.11 U	0.10 U
1,2-Dichlorobenzene <sup>r</sup>		0.11 U	0.15 U	0.13 U	0.15 U	0.14 U	0.11 U	0.13 U	21 U	0.11 U	0.13 U	0.12 U
1,2-Dichloroethane	3,100	0.090 U	0.59 J	0.10 U	0.12 U	0.11 U	0.089 U	0.10 U	73 J	0.53 J	0.10 U	0.10 U
1,2-Dichloropropane	NS 53.000	0.14 U	0.18 U	0.15 U	0.18 U	0.17 U	0.14 U	0.16 U	17 U	0.14 U	0.15 U	0.2 U
1,3,5-Trimethylbenzene'	52,000	28	0.29 J	0.12 U	1.1	0.13 U	0.11 U	0.12 U	24 U	0.10 U	0.12 U	0.11 U
1,3-Dichlorobenzene <sup>r</sup>	49,000	0.098 U	0.13 U	0.11 U	0.13 U	0.12 U	0.097 U	0.11 U	32 U	0.096 U	0.11 U	0.10 U
1,4-Dichlorobenzene	13,000	0.11 U	0.14 U	0.12 U	0.14 U	0.13 U	0.11 U	0.12 U	32 U	0.10 U	0.12 U	0.11 U
1,4-Dioxane	13,000 100,000 <sup>a</sup>	5.2 U	6.8 U	5.8 U *	6.8 U *	6.4 U*	5.2 U	6.0 U	840 U	5.1 U *	5.8 U *	6 U*
2-Butanone		2.7 J	5.9	0.70 U	8.4	3.3 J	4.4	6.6	210 U	0.62 U	0.70 U	0.7 U
2-Hexanone	NS	0.77 U	1.0 U	0.85 U	1.0 U	0.94 U	0.76 U	0.89 U	70 U	0.75 U	0.85 U	0.8 U
4-Methyl-2-pentanone	NS 400,000 <sup>8</sup>	1.8 U	2.4 U	2.0 U	2.4 U	2.2 U	1.8 U	2.1 U	61 U	1.8 U	2.0 U	1.9 U
Acetone	100,000 <sup>a</sup>	22	34 B	20	67	20	46	48	100 U	21	12	9
Benzene	4,800	5.5	0.27 J	0.18 U	0.21 U	0.20 U	0.16 U	0.19 U	18 U	0.44 J	0.18 U	0.17 U
Bromodichloromethane	NS	0.31 U	0.40 U	0.34 U	0.40 U	0.38 U	0.31 U	0.36 U	15 U	0.30 U	0.35 U	0.33 U
Bromoform	NS	0.11 U	0.14 U	0.12 U	0.14 U	0.13 U	0.11 U	0.12 U	17 U	0.10 U	0.12 U	0.1 U
Bromomethane	NS	0.26 U	0.34 U	0.29 U	0.34 U	0.32 U	0.26 U	0.30 U	17 U	0.26 U	0.29 U	0.28 U
Carbon disulfide	NS	0.35 U	1.4	1.5	3.9	0.43 U	0.35 U	0.64 J	21 U	0.69 J	1.0	1 J
Carbon tetrachloride <sup>f</sup>	2,400	0.35 U	0.46 U	0.39 U	0.46 U	0.43 U	0.35 U	0.41 U	32 U	0.34 U	0.39 U	0.37 U
Chlorobenzene	100,000 <sup>a</sup>	0.11 U	0.15 U	0.13 U	0.15 U	0.14 U	0.11 U	0.13 U	40 J	0.11 U	0.13 U	0.12 U
Chloroethane	NS	0.29 U	0.37 U	0.32 U	0.37 U	0.35 U	0.28 U	0.33 U	36 U	0.28 U	0.32 U	0.3 U
Chloroform	49,000	0.17 U	0.22 U	0.19 U	0.22 U	0.21 U	0.17 U	0.20 U	21 U	0.17 U	0.19 U	0.18 U
Chloromethane	NS	0.31 U	0.40 U *	0.34 U	0.40 U	0.38 U	0.31 U	0.36 U	21 U	0.30 U	0.35 U	0.33 U
cis-1,2-Dichloroethene <sup>f</sup>	100,000 <sup>a</sup>	0.21 J	0.57 J	0.38 J	0.23 U	0.22 U	1.0	0.74 J	600	4.2	0.20 U	0.19 U
cis-1,3-Dichloropropene	NS	0.12 U	0.16 U	0.14 U	0.16 U	0.15 U	0.12 U	0.14 U	16 U	0.12 U	0.14 U	0.13 U
Cyclohexane	NS	110	31	0.42 U	5.9	0.46 U	0.37 U	0.43 U	25 U	0.37 U	0.42 U	0.40 U
Dibromochloromethane	NS	0.12 U	0.16 U	0.14 U	0.16 U	0.15 U	0.12 U	0.14 U	21 U	0.12 U	0.14 U	0.13 U
Dichlorodifluoromethane	NS	0.26 U	0.34 U *	0.29 U	0.34 U	0.32 U	0.26 U	0.30 U	14 U	0.26 U	0.29 U	0.28 U
Ethylbenzene <sup>f</sup>	41,000	37	0.19 U	0.16 U	0.68 J	0.18 U	0.15 U	0.17 U	29 U	0.14 U	0.16 U	0.16 U
Isopropylbenzene	NS	17	0.46 J	0.15 U	0.46 J	0.17 U	0.14 U	0.16 U	31 U	0.14 U	0.15 U	0.15 U
Methyl acetate	NS	0.74 U	0.95 U	0.81 U	0.96 U	0.90 U	0.73 U	0.85 U	56 U	0.72 U	0.82 U	0.8 U
Methyl tert butyl ether <sup>f</sup>	100,000 <sup>a</sup>	0.14 U	0.18 U	0.15 U	0.18 U	0.17 U	0.14 U	0.16 U	13 U	0.14 U	0.15 U	0.15 U
Methylcyclohexane	NS	210	7.7	0.45 U	17	0.50 U	0.41 U	0.47 U	21 U	0.40 U	0.45 U	0.5 J
Methylene chloride	100,000 <sup>a</sup>	0.26 U	0.34 U	0.29 U	0.34 U	0.32 U	0.26 U	0.30 U	20 U	0.26 U	0.29 U	0.3 U
n-Butylbenzene <sup>f</sup>	100,000 <sup>a</sup>	7.9	0.22 U	0.19 U	0.22 U	0.21 U	0.17 U	0.20 U	26 U	0.17 U	0.19 U	0.18 U
n-Propylbenzene <sup>f</sup>	100,000 <sup>a</sup>	17	0.19 U	0.16 U	0.50 J	0.18 U	0.15 U	0.17 U	28 U	0.14 U	0.16 U	0.16 U
sec-Butylbenzene <sup>f</sup>	100,000 <sup>a</sup>	4.5	0.64 J	0.15 U	0.28 J	0.17 U	0.14 U	0.16 U	30 U	0.14 U	0.15 U	0.15 U
Styrene	NS	0.12 U	0.16 U	0.14 U	0.16 U	0.15 U	0.12 U	0.14 U	16 U	0.12 U	0.14 U	0.13 U
tert-Butylbenzene <sup>f</sup>	100,000 <sup>a</sup>	1.0	0.76 J	0.31 U	0.36 U	0.34 U	0.28 U	0.32 U	27 U	0.27 U	0.31 U	0.29 U
Tetrachloroethene Tetrachloroethene	19,000	0.52 J	0.52 J	0.25 U	0.30 U	0.28 U	0.26 J	0.28 J	8,100	0.72 J	0.25 U	0.30 J
Toluene	100,000 <sup>a</sup>	2.9	0.20 U	0.17 U	0.28 J	0.38 J	0.25 J	0.18 U	24 U	0.32 J	0.17 J	0.16 U
trans-1,2-Dichloroethene <sup>f</sup>	100,000 <sup>a</sup>	0.32 U	0.41 U	0.35 U	0.41 U	0.39 U	0.32 U	0.37 U	22 J	0.77 J	0.35 U	0.34 U
trans-1,3-Dichloropropene	NS	0.082 U	0.11 U	0.090 U	0.11 U	0.10 U	0.081 U	0.094 U	18 U	0.080 U	0.091 U	0.1 U
Trichloroethene	21,000	0.21 U	0.28 U	0.24 U	0.28 U	0.26 U	0.21 U	0.27 J	1,600	2.4	0.24 U	0.2 U
Trichlorofluoromethane	NS NS	0.28 U	0.36 U	0.31 U	0.36 U	0.34 U	0.21 U	0.32 U	15 U	0.27 U	0.31 U	0.29 U
Vinyl chloride <sup>f</sup>	900	0.32 U	1.8 *	0.35 U	0.50 J	0.39 U	0.32 U	0.52 J	19 U	0.72 J	0.35 U	0.24 U
Xylenes	100,000°	79	0.44 J	0.10 U	1.60 J	0.11 U	0.09 U	0.10 U	27 U	0.088 U	0.33 U	0.095 U
Ayicrics		14	U.44 J	0.10 0	1.0U J	U.11 U	U.U9 U	0.10 0	21 U	U.U00 U	U. I U	U.090 U

(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06

- a The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.
- e For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

f - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the department and department of health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

#### NS - No Standard

B - Compound was found in the blank and sample.

- J Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.
- JN The analysis indicated the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.
- R Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified. U - The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as nondetect.
- UJ The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The "UJ" data may be biased low.

  Highlighted text denotes concentrations exceeding NYSDEC Restricted-Residential Use SCO

# Table 2 Soil Sample Analytical Data Summary Semi-Volatile Organic Compounds EPA Method 8270

#### LiTungsten Site

Client Sample ID:		EP032	EP033	EP034	EP035	EP036	EP037	EP038	EP039	EP040	EP041	EP042
Sample Depth:	NYSDEC Restricted-	4' (B)	3-4' (SW)	3-4' (SW)	3-4' (SW)	3-4' (SW)	4' (B)	4' (B)	3-4' (SW)	3-4' (SW)	3-4' (SW)	3-4' (SW)
Laboratory ID: Sampling Date:	Residential Use SCO (1)	460-93744-3 4/22/2015	460-93744-4 4/22/2015	460-93744-5 4/22/2015	460-93744-2 4/22/2015	460-93744-7 4/22/2015	460-93744-8 4/22/2015	460-93744-9 4/22/2015	460-93744-10 4/22/2015	460-93744-11 4/22/2015	460-93744-12 4/22/2015	460-93744-13 4/22/2015
Semi-Volatile Organic Compounds		4/22/2015	4/22/2013	4/22/2015	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2015	4/22/2015	4/22/2013
2,4,5-Trichlorophenol	NS	39 U	42 U	38 U	39 U	39 U	39 U	38 U	42 U	37 U	37 U	38 U
2,4,6-Trichlorophenol	NS	11 U	12 U	11 U	12 U	11 U	11 U	11 U				
2,4-Dichlorophenol	NS	9.3 U	10 U	9 U	9 U	9 U	9.3 U	9 U	10 U	9 U	9 U	9 U
2,4-Dimethylphenol	NS	87 U	93 U	85 U	87 U	87 U	87 U	84 U	92 U	81 U	82 U	83 U
2,4-Dinitrophenol 2.4-Dinitrotoluene	NS NS	300 U	320 U	290 U	300 U	300 U	300 U	290 U	320 U	280 U	280 U	290 U
2.4-Dinitrotoluene 2.6-Dinitrotoluene	NS NS	16 U 21 U	17 U 23 U	15 U 21 U	16 U 21 U	16 U	16 U 21 U	15 U 20 U	17 U 22 U	15 U 20 U	15 U 20 U	15 U 20 U
2-Chloronaphthalene	NS NS	8.9 U	10 U	9 U	9 U	9 11	9 11	9 U	24 J	8 U	9 U	9 U
2-Chlorophenol	NS	10 U	11 U	10 U	11 U	9 U	10 U	10 U				
2-Methylnaphthalene	NS	74 J	65 J	18 J	65 J	29 J	8.7 U	8 U	57 J	62 J	44 J	25 J
2-Methylphenol	NS	17 U	18 U	17 U	18 U	16 U	16 U	17 U				
2-Nitroaniline	NS	13 U	14 U	13 U	14 U	12 U	12 U	12 U				
2-Nitrophenol	NS	13 U	14 U	13 U	14 U	12 U	13 U	13 U				
3,3'-Dichlorobenzidine 3-Nitroaniline	NS NS	44 U	47 U	43 U	44 U	44 U	44 U	43 U	47 U	41 U	42 U	42 U
4,6-Dinitro-o-cresol	100,000°	12 U 110 U	13 U 110 U	11 U 100 U	12 U 100 U	12 U 110 U	12 U 110 U	11 U 100 U	12 U 110 U	11 U 99 U	11 U 100 U	11 U 100 U
4-Bromophenyl phenyl ether	NS	12 U	13 U	12 U	13 U	12 U	12 U	12 U				
4-Chloro-3-methylphenol	NS	17 U	18 U	17 U	17 U	17 U	17 U	16 U	18 U	16 U	16 U	16 U
4-Chloroaniline	NS	10 U	11 U	10 U	11 U	10 U	10 U	10 U				
4-Chlorophenyl phenyl ether	NS	12 U	13 U	12 U	12 U	12 U	12 U	11 U	13 U	11 U	11 U	11 U
4-Methylphenol	NS NS	11 U	64 J	15 J	13 J	11 U	11 U	10 U	14 J	10 U	10 U	10 U
4-Nitroaniline 4-Nitrophenol	NS NS	15 U 190 U*	16 U 200 U*	15 U 190 U*	15 U 190 U*	15 U 190 U*	15 U 190 U*	14 U 180 U*	16 U 200 U*	14 U 180 U *	14 U 180 U*	14 U 180 U *
Acenaphthene	100,000°	9.5 U	310 J	170 U	31 J	22 J	9.6 U	9 U	200 U	9 U	14 J	31 J
Acenaphthylene'	100,000°	10 U	29 J	32 J	18 J	29 J	10 U	10 U	90 J	14 J	25 J	23 J
Acetophenone	NS	30 J	9 U	8 U	19 J	9 U	8.6 U	8 U	9 U	8 U	8 U	8 U
Anthracene'	100,000°	37 U	910	49 J	62 J	71 J	38 U	36 U	49 J	48 J	62 J	94 J
Atrazine	NS	18 U	19 U	17 U	17 U	18 U	18 U	17 U	19 U	16 U	17 U	17 U
Benzaldehyde Benzo(a)anthracene'	NS 1,000'	30 U	32 U	29 U	30 U	30 U	30 U	29 U	32 U	29 J	29 U	30 J
Benzo(a)pyrene	1,000	33 U 24 J	2,200	220 280	210	330 350	33 U 12 U	32 U 20 J	160 140	270 310	300	740 840
Benzo(b)fluoranthene'	1,000'	33 J	2,000	280 340	260	510	12 U	20 J 31 J	220	410	450	1.000
Benzo(ghi)perylene'	100,000°	23 U	1,500	250 J	220 J	380 J	23 U	22 U	110 J	300 J	410	730
Benzo(k)fluoranthene'	3,900	17 U	820	120	110	180	17 U	17 U	78	130	180	330
Biphenyl	NS	34 U	36 U	33 U	34 U	34 U	34 U	33 U	36 U	32 U	32 U	32 U
Bis(2-chloroisopropyl)ether	NS	16 U	17 U	16 U	17 U	15 U	15 U	16 U				
Bis(2-chloroethoxy)methane	NS NS	12 U	13 U	12 U	13 U	12 U	12 U	12 U				
Bis(2-chloroethyl)ether Bis(2-Ethylhexyl)phthalate	NS NS	9.3 U	10 U	9 U 26 I	9 U	9 U	9.3 U 15 U	9 U 15 U	10 U 34 J	9 U	9 U 28 I	9 U
Butyl benzyl phthalate	NS NS	12 U	13 U	12 U	13 U	11 U	12 U	12 U				
Caprolactum	NS	120 J	30 U	28 U	28 U	28 U	28 U	27 U	30 U	27 U	27 U	27 U
Carbazole	NS	390 U	140 J	11 J	20 J	22 J	9.8 U	10 U	19 J	11 J	18 J	24 J
Chrysene'	3,900	38 J	2,200	290 J	240 J	390	11 U	27 J	230 J	310 J	320 J	860
Dibenzo(a,h)anthracene' Dibenzofuran'	330°	20 U	370	59	46	120	21 U	20 U	22 U	70	96	200
	59,000 NS	12 U	130 J	18 J 11 U	63 J	32 J	12 U	12 U	18 J 12 U	11 U	36 J	16 J
Diethyl phthalate Dimethyl phthalate	NS NS	11 U	12 U	11 U	12 U 12 U	11 U	11 U	11 U				
Di-n-butylphthalate	NS	12 U	12 U	12 U	12 U	18 J	12 U	11 U	13 U	13 J	11 U	11 U
Di-n-octylphthalate	NS	20 U	21 U	20 U	20 U	20 U	20 U	19 U	21 U	19 U	19 U	19 U
Fluoranthene'	100,000"	100 J	4,000	400	380 J	560	12 U	17 J	350 J	420	440	1,300
Fluorene	100,000°	20 J	310 J	25 J	60 J	29 J	8.6 U	8 U	24 J	11 J	24 J	29 J
Hexachlorobenzene	1,200	16 U	17 U	16 U	16 U	16 U	16 U	15 U	17 U	15 U	15 U	15 U
Hexachlorobutadiene  Hexachlorocyclopoptadiono	NS NS	11 U	12 U	11 U	11 U	11 U 25 U	11 U	11 U	12 U	10 U	11 U	11 U
Hexachlorocyclopentadiene Hexachloroethane	NS NS	25 U	26 U	24 U	25 U 14 U	25 U	25 U	24 U	26 U	23 U 14 U	23 U 14 U	24 U
Indeno(1,2,3-cd)Pyrene'	500'	26 U	1,900	300	230	450	26 U	25 U	150	360	460	840
Isophorone	NS	8.5 U	9 U	8 U	77 J	9 U	8.5 U	8 U	12 J	8 U	8 U	340
Naphthalene <sup>r</sup>	100,000°	51 J	130 J	28 J	49 J	36 J	10 U	10 U	210 J	70 J	41 J	30 J
Nitrobenzene	NS	12 U	13 U	12 U	13 U	12 U	12 U	12 U				
n-Nitrosodi-n-propylamine	NS	13 U	14 U	13 U	14 U	12 U	13 U	13 U				
NitrosoDiPhenylAmine(NDPA)/DPA	NS 4.700	36 U	38 U	35 U	36 U	36 U	36 U	35 U	38 U	34 U	34 U	34 U
Pentachlorophenol Phenanthrene'	6,700 100,000 <sup>a</sup>	48 U	51 U 2 600	47 U	48 U	48 U 230 J	48 U	46 U	51 U 270 J	45 U	45 U 150 J	46 U 340 J
Phenol	100,000°	110 J	2,600 14 U	130 J	260 J	13 U	13 U	10 U	14 U	150 J	150 J	12 U
Pyrene'	100,000"	90 J	3,200	400	320 J	490	18 U	26 J	280 J	330 J	350 J	1,200
Total SVOCs		660	25,106	3,028	3,083	4,438	ND	121	2,552	3,362	3,828	9,041
<u> </u>				<del> </del>						•		

- Notes:

  (1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06

  a The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.2.

  c The SCOs for industrial use and protection of groundwater were capped at a maximum value of 1,000 ppm. See TSD section 9.3.

  e For constituents where the calculated SCO was lower than the contract required quantitation intrit (CROL), the CROL is used as the SCO value.
- f For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the department and department of health rural soil survey, the rural soil background concentration is used as the frack 2 SCO value for this use of the site.

- NS No Standard B - Compound was found in the blank and sample.
- B Compound was found in the blank and sample.

  J Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.

  JN The analysis indicated the presence of a compound that has been Tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.

  R Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

  U The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as non-detect.

- UI The analyte was not delected above the reported sample quantitation limit. Data are flagged (IU) when a CC analysis falls outside the primary acceptance limits. The qualified "UI" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated OC analyses may fall. The "UI" data may be biased low.

  Highlighted text denotes concentrations exceeding NYSDEC Restricted-Residential Use SCO

#### Table 3

#### Soil Sample Analytical Data Summary Total Metals EPA Method 6010

#### LiTungsten Site

Client Sample ID:		EP032	EP033	EP034	EP035	EP036	EP037	EP038	EP039	EP040	EP041	EP042
Sample Depth:	NYSDEC Restricted-Residential	4' (B)	3-4' (SW)	3-4' (SW)	3-4' (SW)	3-4' (SW)	4' (B)	4' (B)	3-4' (SW)	3-4' (SW)	3-4' (SW)	3-4' (SW)
Laboratory ID:	Use SCO <sup>(1)</sup>	460-93744-3	460-93744-4	460-93744-5	460-93744-2	460-93744-7	460-93744-8	460-93744-9	460-93744-10	460-93744-11	460-93744-12	460-93744-13
Sampling Date:		4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015	4/22/2015
Total Metals (mg/kg)				•			•			•		
Aluminum, Total	NS	7,190	6,080	4,310	4,190	5,120	11,800	6,540	7,530	4,610	4,900	6,820
Antimony, Total	NS	1.6 U	1.6 U	3.2 J	1.6 U	1.8 J	1.5 U	1.6 U	1.8 U	18.5	4.0 J	3.0 J
Arsenic, Total	24*	3.8	3.4	6.9	8.8	18.0	4.6	3.5	47.1	55.1	7.1	6.4
Barium, Total	400	36.5 J	34.0 J	42.9 J	22.8 J	44.7	34.8 J	23.9 J	56.7	34.3 J	39.6 J	40.5 J
Beryllium, Total	72	0.34 J	0.29 U	0.29 U	0.30 U	0.30 U	0.29 J	0.31 J	0.55	0.28 U	0.29 U	0.39 J
Cadmium, Total	4.3	0.30 U	0.31 U	0.31 U	0.31 U	1.0	0.29 U	0.30 U	0.34 U	0.33 J	0.31 U	0.310 U
Calcium, Total	NS	2,050	3,050	1,760	3,130	10,500	1,170	857 J	2,150	17,500	11,100	2,980
Chromium, Total <sup>e</sup>	180	15.9	14.5	12.0	11.0	13.8	25.0	12.0	13.1	11.8	10.5	13.4
Cobalt, Total	NS	4.3 J	4.5 J	17.4	13.9	8.9 J	6.8 J	4.1 J	8.8 J	29.5	6.3 J	10.1 J
Copper, Total	270	10.9	11.6	15.5	16.6	41.4	11.5	8.1	27.4	44.3	20.5	18.6
Iron, Total	NS	14,900	11,700	12,400	7,240	10,500	26,100	20,600	17,000	13,100	10,300	14,200
Lead, Total	400	8.9	31.5	342	17.6	71.9	9.1	4.0	20.0	43.4	53.0	39.0
Magnesium, Total	NS	2,370	2,570	1,360	1,550	3,930	3,210	997 J	1,110 J	7,520	4,640	2,010
Manganese, Total	2,000 <sup>f</sup>	125	167	105	81.5	206	308	218	92.3	183	161	221
Nickel, Total	310	8.1 J	8.6	10.3	8.5 J	12.0	11.0	6.2 J	15.0	17.1	8.0 J	11.3
Potassium, Total	NS	903 J	682 J	705 J	584 J	753 J	938 J	373 J	798 J	460 J	447 J	558 J
Selenium, Total	180	1.2 U	1.2 U	4.5	6.9	3.5 J	1.2 U	2.3 J	3.0 J	8.7	2.4 J	1.3 U
Silver, Total	180	0.41 U	0.42 U	0.42 U	0.55 J	3.1	0.40 U	0.42 U	0.46 U	1.0 J	0.42 U	0.43 U
Sodium, Total	NS	80.5 U	81.5 U	92.9 J	86.1 J	107 J	114 J	80.9 U	172 J	84.5 J	98.5 J	96.3 J
Thallium, Total	NS	2.1 U	2.1 U	5.3 U	10.7 U	5.4 U	2.0 U	2.1 U	2.3 U	10.1 U	5.3 U	2.2 U
Vanadium, Total	NS	21.8	17.2	15.5	10.5 J	15.6	32.9	16.3	20.8	17.2	14.5	17.7
Zinc, Total	10,000 <sup>d</sup>	30.0	81.0	37.0	33.6	72.6	34.4	27.4	154	108	52.6	39.3
Mercury, Total	0.81 <sup>1</sup>	0.070	0.046	0.077	0.27	0.047	0.013 U	0.035	0.17	0.92	0.096	0.17

#### Notes:

- (1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06
- \* Site Specific Cleanup Objective
- d The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.
- f For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the department and department of health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.
- j This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

NS - No Standard

- B Compound was found in the blank and sample.
- J Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.
- JN The analysis indicated the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.
- R Data rejected ® on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence of the analyte cannot be verified.
- U The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as nondetect.
- UJ The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The "UJ" data may be biased low.

Highlighted text denotes concentrations exceeding NYSDEC Restricted-Residential Use SCO

#### Table 4

#### Soil Sample Analytical Data Summary PCBS EPA Method 8082

#### LiTungsten Site

Client Sample ID: Sample Depth: Laboratory ID: Sampling Date:	NYSDEC Restricted -Residential Use (Below Top 2 Feet) <sup>(1)</sup>	EP033 3-4' (SW) 460-93744-4 4/22/2015	EP035 3-4' (SW) 460-93744-2 4/22/2015	EP040 3-4' (SW) 460-93744-11 4/22/2015	EP042 3-4' (SW) 460-93744-13 4/22/2015	
Polychlorinated Biphenyls (µg/kg)  Aroclor 1016	10,000	19 L	18 U	17 U	17 U	
Aroclor 1221	10,000	19 L	18 U	17 U	17 U	
Aroclor 1232	10,000	19 L	18 U	17 U	17 U	
Aroclor 1242	10,000	19 L	18 U	17 U	17 U	
Aroclor 1248	10,000	19 L	380	17 U	17 U	
Aroclor 1254	10,000	24 L	23 U	110	48 J	
Aroclor 1260	10,000	24 U	23 U	21 U	22 U	

#### Notes:

- (1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06
- a The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.
- c The SCOs for industrial use and protection of groundwater were capped at a maximum value of 1,000 ppm. See TSD section 9.3.
- i This SCO is for the sum of Endosulfan I, endosulfan II, and endosulfan sulfate.
- NS No Standard
- B Compound was found in the blank and sample.
- J Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.
- JN The analysis indicated the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.
- R Data rejected ® on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified. U The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as nondetect.
- UJ The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The "UJ" data may be biased low.

Highlighted text denotes concentrations exceeding NYSDEC Restricted-Residential Use SCO



### **APPENDIX A**



#### **Daily Air Monitoring Record Form**

Garvie's Point Redevelopment - Glen Cove, NY

Date:	3/25	/2015		Number:	RGI	1404		_		
	Location:					Glen Cove, New York; Li				
Site Safety Officer:	AR			Tungsten, Captain's Cove						
Weather Conditions:	Sunny	31F	Wind: N	@ 3 mph						
Instrument Make & Model:	MiniRa	e <sup>3000</sup> PID		nt Make & odel:		ermo Corp PDR				
			Ti	me	Bac	kground Re	ading	1		
Pre-Start Readings:	P	ID		:20		0.0				
	Di	ust	8:20		0.055					
			-					<u>-</u>		
					A	ir Monitorii	ng Locations	5		
	No	rth	So	uth				'est		
Time	Stat	Station 1		Station 2		Station 3		ion 4	Tasks	
	PID	Dust	PID	Dust	PID	Dust	PID	Dust		
8:30	0.0	0.054	0.0	0.074	0.0	0.081	0.0	0.065	Waste Characterization	
9:00	0.0	0.066	0.0	0.067	0.0	0.071	0.0	0.057		
9:30	0.0	0.056	0.0	0.065	0.0	0.080	0.0	0.066		
10:00	0.0	0.065	0.0	0.059	0.0	0.071	0.0	0.065		

Dust Suppressant
Necessary:

Dust Suppressant
Used:

No dust suppressant necessary.

Notes/Comments:

No levels exceeded, no problems encountered.

Note: PID concentrations recorded in parts per million (ppm)
Particulate concentrations recorded in mg/m<sup>3</sup>



Tasks
TP-P-006 Endpoint Sampling

Break

TP-P-006 Endpoint Sampling

#### **Daily Air Monitoring Record Form**

Garvie's Point Redevelopment - Glen Cove, NY

Date:	4/22	/2015	Project N	Number:	RG	RGI1503			
Site Safety Officer: A		Loca	tion:	Glen	Cove, New				
		A	AR		Gien	Tungsten			
					•				
Weather Conditions:	Partly Sunny	46-60F	Wind: SSE	@ 4mph					
	ı						1		
Instrument Make & Model:	MiniRa	e <sup>3000</sup> PID	Instrument Make & Model:			ermo nCorp PDR			
							_	_	
			Tir	ne	Bac	kground Re			
Pre-Start Readings:	P	ID	8:	30		0.0			
	Di	ıst	8:30			0.000			
					А	ir Monitorir	ng Locations		
	No	rth	Sou	uth	E	ast	W	est	
Time	Stat	ion 1	Stati	Station 2		tion 3	Stat	ion 4	
12:00	0.0	0.000	0.0	0.000	0.0	0.000	0.0	0.000	
12:30	0.0	0.000	0.0	0.000	0.0	0.000	0.0	0.000	
13:00	0.0	0.000	0.0	0.006	0.0	0.004	0.0	0.008	
13:30	0.0	0.001	0.0	0.006	0.0	0.000	0.0	0.007	
14.00	0.0	0.002	0.0	0.007	0.0	0.002	0.0	0.000	

0.016

0.0

0.021

0.0

0.016

Dust Suppressant
Necessary:
No

14:30

Dust Suppressant No dust suppressant necessary.
Used:

0.0

0.020

0.0

Notes/Comments: No levels exceeded, no problems encountered.

Note: PID concentrations recorded in parts per million (ppm)
Particulate concentrations recorded in mg/m<sup>3</sup>

P.W. Grosser Consulting, Inc • P.W. Grosser Consulting Engineer & Hydrogeologist, PC 630 Johnson Avenue, Suite 7 • Bohemia, NY 11716
PH 631.589.6353 • FX 631.589.8705 • www.pwgrosser.com
New York, NY • Syracuse, NY • Seattle, WA • Shelton, CT



## **APPENDIX B**